

**REMARKS**

The Examiner makes the following rejections:

- A. Claims 108 and 118 are rejection under section 112 as allegedly not supported by the specification; and
- B. The Claims are rejected as obvious under section 103(a) on the basis of a combination of references (Walt, Felder, Chang, Ravkin etc.)

Applicants traverse and offer the following response.

**A. The Claims Are Supported By The Specification**

The Examiner argues that encapsulated nucleic acid is not taught in the specification. Applicants cannot agree. Nonetheless, the present amendments to Claim 50, while made for other reasons, render the point moot for Claim 108. Without acquiescing to the Examiner's rejection, but to further the prosecution, and hereby expressly reserving the right to prosecute the unamended, original or similar claims in the future, Applicants have canceled Claim 118.

**B. The Claims Are Not Obvious**

The Examiner argues that Walt discloses "the use of *beads* of different size . . ." but differs in that it fails to describe sensing elements of "different shapes" (see Office Action, page 4, emphasis added). Similarly, the Examiner argues that Felder discloses "the beads can be of different size or shape." (emphasis added). Without acquiescing to the Examiner's rejection, but to further the prosecution, and hereby expressly reserving the right to prosecute the unamended, original or similar claims in the future, Applicants have amended Claim 50 to specify that the polymeric material (and thus the sensing element) is non-spherical. This is supported in the present specification at page 11, lines 12-13. Thus, beads of different sizes are not relevant to the subject matter of Claim 50. The change is not trivial since the use of different shapes is what 1) translates the signal into meaningful information (see page 11, lines 9-10: "The sensing elements may have unique shapes, each of the shapes being associated with one or more analytes.") and 2) permits the use of random (rather than ordered) arrays (see page 18, lines 26-27: "FIG

16A depicts an array of cross, square, and triangle shaped sensing elements formed using the random arraying approach.”)

The Examiner also cites Chang and Ravkin (as providing the teaching for different shapes).<sup>1</sup> Applicants submit herewith a Rule 131 Declaration swearing behind the December 1, 2000 filing date of Chang et al.<sup>2</sup> The Examiner is also asked to note that the evidence provided predates the changes in the rules for determining 102(e)/103 that would permit the Ravkin publication to be considered proper prior art.<sup>3</sup> Without the Change and Ravkin art, the obviousness rejection cannot be maintained. The Pope, Dakss, Kaetsu and Peters et al. references do not provide these (now missing) elements. Thus, it is respectfully submitted that the claims should be allowed.

### **CONCLUSION**

It is believed that the arguments and amendments (as well as the 131 Declaration which removes certain references as prior art) render the claims allowable. Should the Examiner believe that a telephone interview would aid in the prosecution of this application Applicants encourage the Examiner to call the undersigned collect at (617) 984-0616

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By:   
Thomas C. Howerton  
Reg. No. 48,650

Medlen & Carroll, LLP  
101 Howard Street, Ste. 350  
San Francisco, CA 94105  
617-984-0616

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<sup>1</sup> Applicants submit that there is not basis for combining the “bead” art of Walt with the other cited references and that the Examiner’s statement that it would be “obvious” to substitute sensing elements of different shapes for the beads of Walt is without any factual foundation. The Walt system involves microspheres in wells along with a optical fiber detection scheme. The Examiner has provided no concrete basis for why one skilled in the art would displace this system or how such modifications would function, let alone demonstrate improved function over what Walt actually teaches.

<sup>2</sup> The 131 Declaration is currently signed by Dr. Willson, however, the signatures of the other inventors are being sought. When additional signatures are obtained, the Examiner will be notified and the document will be faxed.

<sup>3</sup> With that said, Applicants’ representative has discovered that a Ravkin application eventually issued as Patent No. 6,908,737.